



Age 5



Age 21



Age 6



Age 13

Other Abnormalities

Alcohol-Related Birth Defects (ARBD)

- **Cardiac**
- **Auditory**
- **Ocular**
- **Renal**
- **Skeletal**
- **Other**



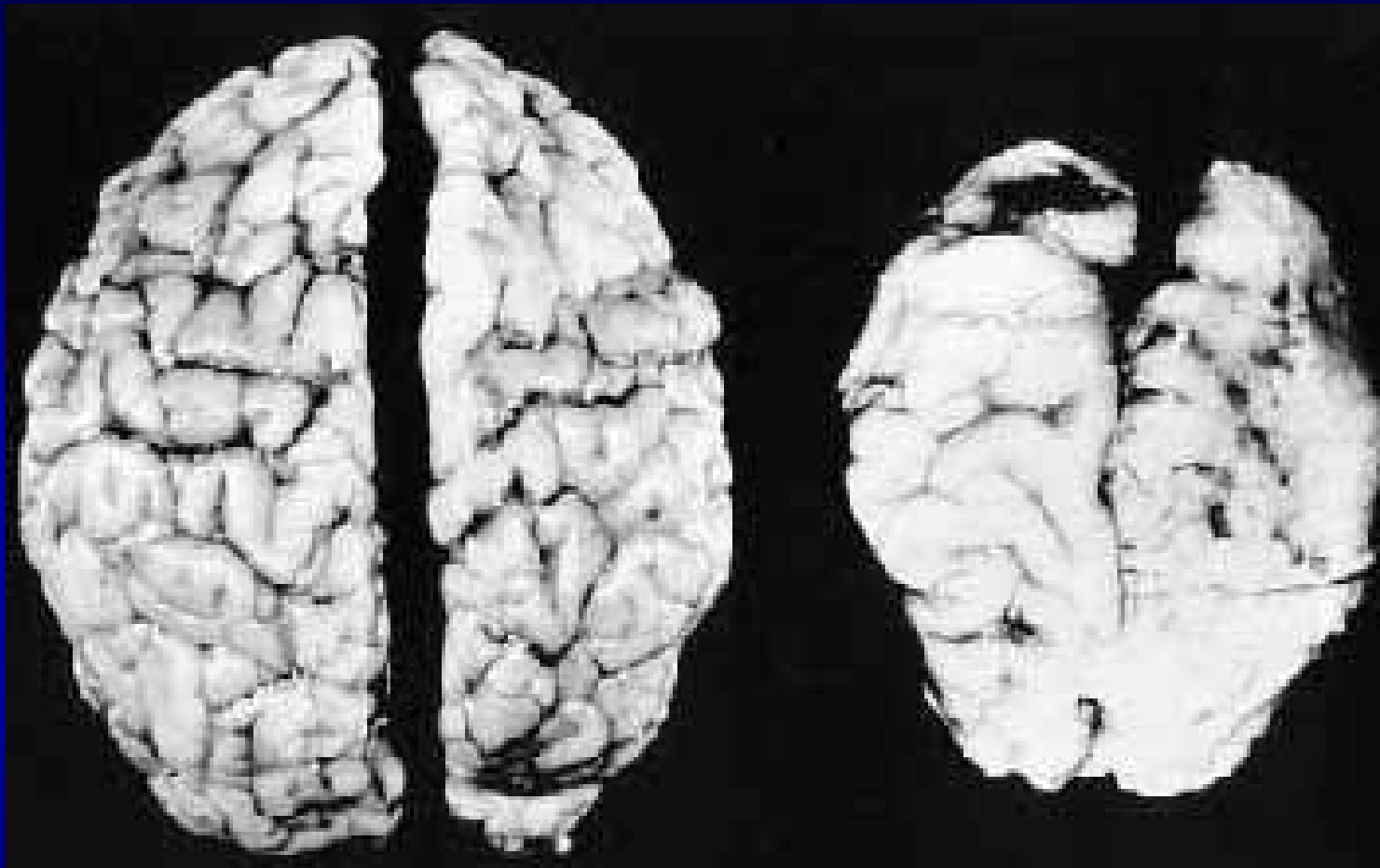
Newborn baby boy with pronounced features of FAS and severe heart disease. Birthweight and length less than 5th percentile for gestational age

DIAGNOSTIC CRITERIA FAS AND ALCOHOL RELATED EFFECTS

(3, 4, and 5 require the presumption that the finding is due to prenatal alcohol exposure)

1. **FAS confirmed alcohol exposure**
 - A. confirmed maternal alcohol exposure
 - B. characteristic facial anomalies
 - C. growth retardation
 - D. neurodevelopmental abnormalities
2. **FAS without confirmed maternal alcohol exposure**
B, C, and D above
3. **Partial FAS with confirmed maternal alcohol exposure**
 - A. confirmed maternal alcohol exposure
 - B. some or partial characteristic facial features
 - C. growth retardation
 - D. neurodevelopmental abnormalities
 - E. behavioral or cognitive abnormalities presumed due to prenatal alcohol exposure
4. **Alcohol-Related Birth Defects (ARBD)**

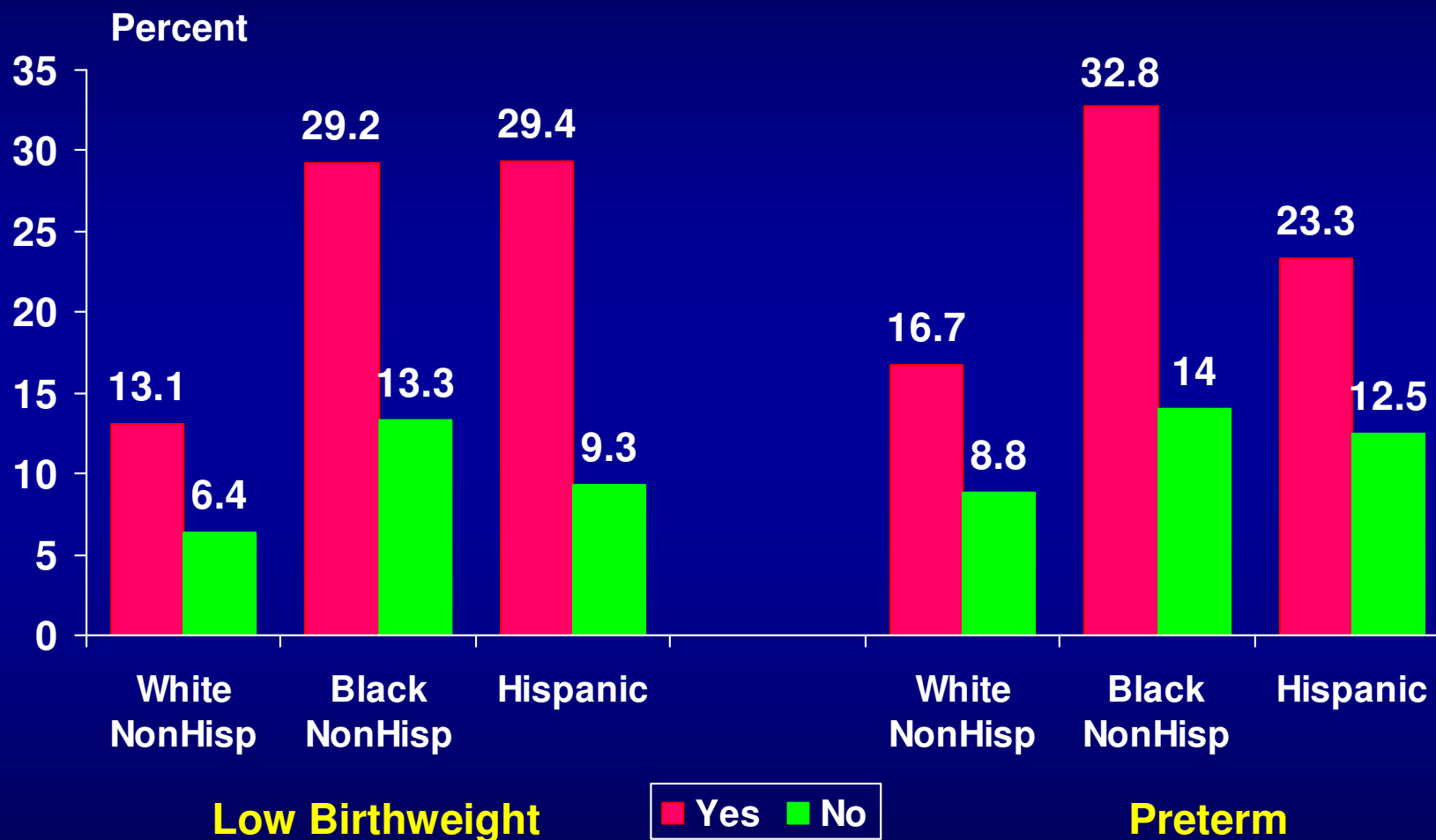
Cardiac	Ocular-Auditory	Other
Skeletal	Renal	
5. **Alcohol-Related Neurodevelopmental Disorder (ARND)**
 - A. CNS neurodevelopmental abnormalities
 - B. Complex pattern of behavior or cognitive abnormalities



Brain of healthy baby

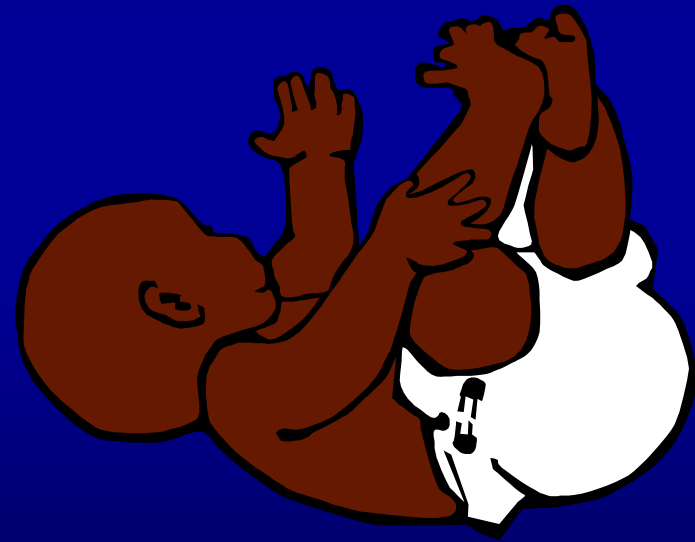
Brain of baby with FAS

LBW (<2500 g) and PTD (<37 wks) by Alcohol Use and by Maternal Race/Ethnicity, CT, 1998



FAS Growth Pattern

- Head circumference \leq 10th percentile
- Weight
- Height/length



Alcohol-Related Neurodevelopmental Disorders (ARND)

For Newborns:

- Sleep disturbances
- Feeding difficulties
- Reduced attention
- Decreased visual focus
- Decreased response to noise/stimulation

Alcohol-Related Neurodevelopmental Disorders (ARND)

For Children 18-24 months:

- Short attention span
- Increased activity
- Altered motor skills
- Increased stress reactivity

Alcohol-Related Neurodevelopmental Disorders (ARND)

For Children 4-5 years old:

- Delayed speech development
- Altered motor skills
- Attention deficits
- Learning deficits
- Caregiver concerns

Long-Term Adverse Effects as Adults

- Mental health problems
- Disrupted school experience
- Trouble with the law
- Confinement
- Inappropriate sexual behavior
- Alcohol/drug problems
- Dependent living
- Problems with employment

(Streissguth, et al., 1996)

How Do We Prevent Fetal Alcohol Exposure?

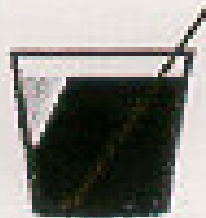
- Recognize the extent of the problem
- Screen all women of childbearing age
- Use appropriate interventions

A “Standard Drink”

A mug of
ordinary
beer, ale, or
malt liquor
12 oz.



A single shot
of spirits --
whiskey, gin,
vodka, etc.
1.5 oz.



A glass
of wine
5 oz.



A wine cooler
12 oz.



A small glass
of sherry,
liqueur, or
aperitif
4 oz.



WARNING



Some drinks contain more than a
“serving” (0.5 oz) of alcohol.



Health advisories urge
women who
are planning
pregnancy
or are pregnant
not to drink alcohol.



Despite warnings, frequent drinking among pregnant women appears to be increasing.



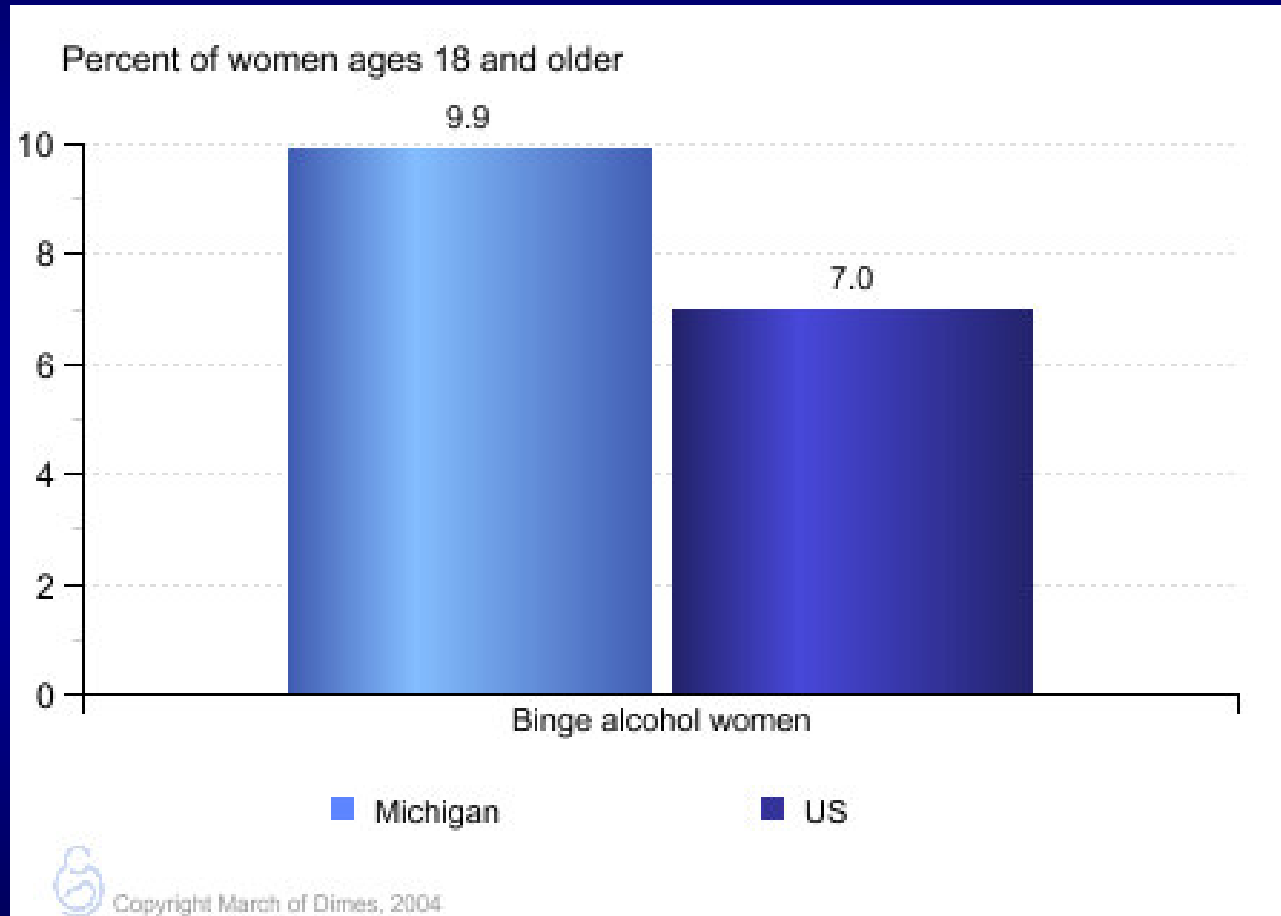
Definition of At-Risk Drinking for Women

- Consumes 8 - 21 standard drinks per week
- Consumes more than 3 standard drinks per occasion
- Drinks in risky situations (e.g., drinking and driving)

Definition of Problem Drinking for Women

- Consumes more than 21 standard drinks per week
- Consumes more than 3 standard drinks per occasion
- May experience negative consequences from such drinking
 - behavioral
 - family
 - medical
 - mental health
 - employment
 - social
 - legal, etc.

Binge Drinking Women 18 +years Michigan and US, 2001



Alcohol Use: Behavioral Risk Factor Surveillance Survey. Behavioral Surveillance Branch,
Centers for Disease Control and Prevention.
Retrieved August 17, 2004, from www.marchofdimes.com/peristats.

Definition of Alcohol Dependence

- Cannot stop drinking once they start
- Experience repeated and multiple problems from such drinking
- Heavy drinking has led to a physical need for alcohol

Screening Tools are the Most Effective Way to Determine Risk

- Laboratory tests and urine toxicologies are generally ineffective tools for determining substance abuse:
 - cocaine 2 to 4 days
 - amphetamines 24 to 48 hours
 - heroin 1 to 2 days
 - alcohol 3 to 10 hours
 - methadone 2 to 3 days
 - codeine 1 to 2 days
 - barbiturates up to 6 weeks
- Quick, brief questionnaires have been demonstrated to be effective in prenatal care for assessing alcohol and drug use
- Pregnant women describe their health care providers as the best source of information and will generally follow the provider's advice

How to Use Screening Tools

- Choose a screen that fits your style and is culturally appropriate for the patients
- Be nonjudgmental and supportive when asking about use
- Stress the benefits of abstinence and offer to help the patient achieve it
- Know where to refer the patient for further assessment
- T-ACE, 4 Ps+, TWEAK, AUDIT, TQDH

4Ps+ (5Ps)

- Have you used drugs or alcohol during this **P**regnancy
- Have you had a problem with drugs or alcohol in the **P**ast?
- Does your **P**artner have a problem with drugs or alcohol?
- Do you consider one of your **P**arents to be an addict or alcoholic?
- + In the month before you knew you were pregnant how many cigarettes did you smoke?

Assessment of Exposure During Pregnancy

- On average how many days per week did you drink during pregnancy? _____(a)
- What is the most you had to drink on any one day during pregnancy? _____
- On an average drinking day during pregnancy how many drinks did you have? _____(b)

Exposure Parameters *(Cumulative exposure during pregnancy)*

- **Pregnancy Drinking Days** = $(a \times 40)$ = _____(c)
 - Estimate of number of drinking days during pregnancy.
- **Percent of Days Exposed During Pregnancy** = $(c \div 280)$ = _____
 - Estimate of days exposed during pregnancy.
- **Number of Drinks During Pregnancy** = $(a \times b \times 40)$ = _____(d)
 - Estimate of number of drinks during pregnancy.
- **Ounces of absolute alcohol** = $(d \div 2)$ = _____
 - Estimate of exposure to absolute alcohol during pregnancy.

Drinking During Pregnancy

Drinks Per Day	Cumulative Fetal Exposure (Drinks per day x 270)	Fetal Exposure to Absolute Alcohol in Oz.*	Full Baby Bottles
1	270	135	15
2	540	270	33
10	2700	1350	168

**1/3 ounce of absolute alcohol is a lethal dose for a newborn.*

Alcohol and College Campuses

- A national Task Force on College Drinking (NIAAA, researchers, students, college presidents- LSU President William Jenkins) stressed the need to change a view of excessive drinking as a harmless rite of passage for college students
- 1400 college students are killed annually in alcohol-related incidents
- College students' drinking is a factor in 500,000 injuries, 600,000 assaults on students and 70,000 cases of sexual assault or date rape
- Recommend education on how alcohol can deter achievement of academic goals, strictly enforcing minimum drinking-age laws, how to resist peer pressure

Health Care Providers Play Key Role in Underage Drinking Prevention

- Ask adolescents about their alcohol, tobacco and other drug use
- Ask what they think about their use
- Provide both written and oral information about the risks and consequences of abuse
- Connect patients with treatment resources as needed
- Connect patients with community groups for teens (especially effective for socially isolated nonusers and experimenters whose peers are using)

Providers

- Can make a profound difference
- Ask every patient and assess need for services
- Know your local resources for referral and treatment

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March of Dimes National Prematurity Campaign

Additional Resources

**Pregnancy and Newborn Health Education Center
askus@marchofdimes.com**



www.marchofdimes.com



Thank you for your attention

www.jjpi.com

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